Baker, (H. B.)

DIAGRAMS

TO ILLUSTRATE A PAPER ON THE

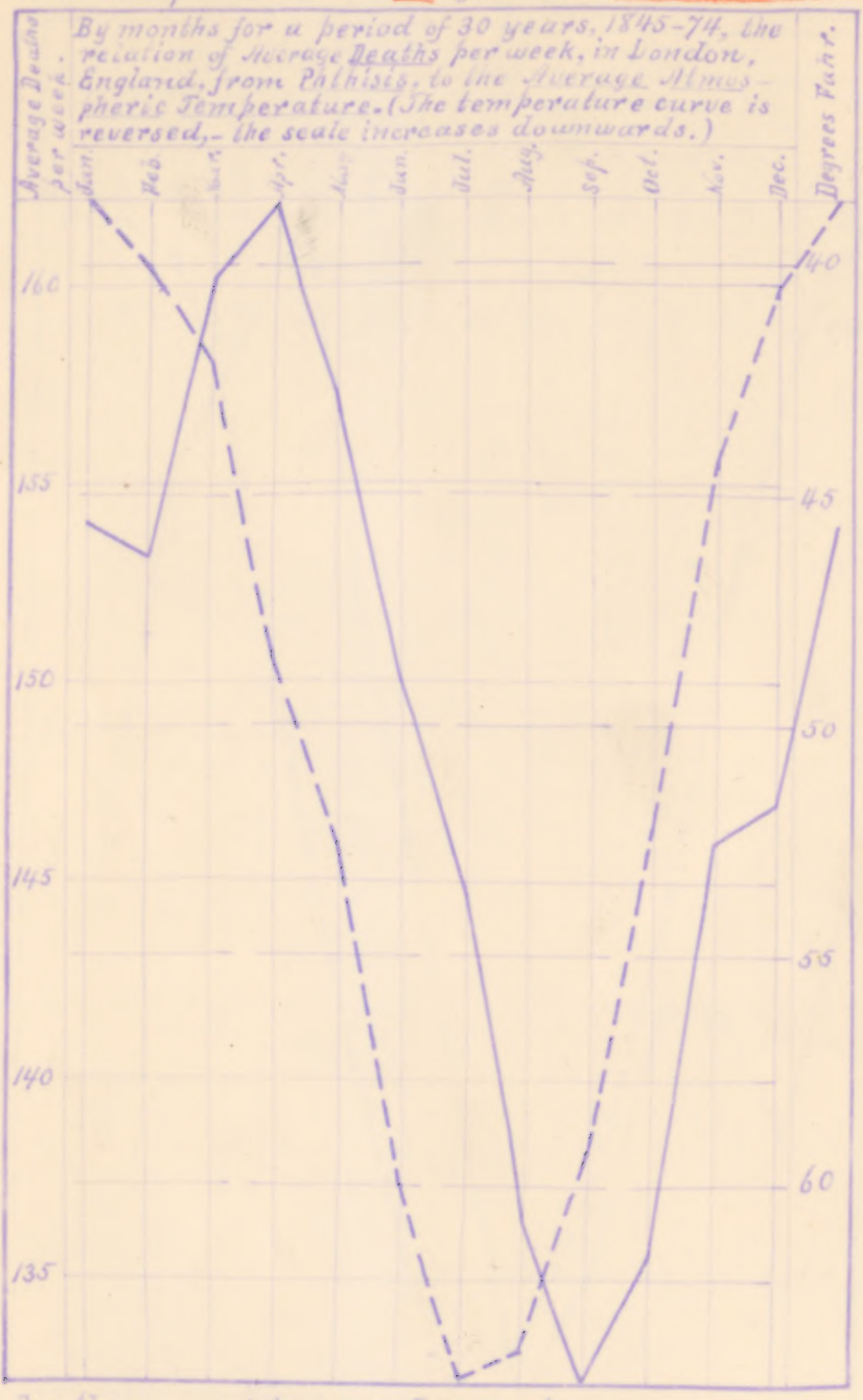
RELATIONS OF CERTAIN METEOROLOGICAL CONDITIONS TO DISEASES OF THE LUNGS AND AIR-PASSAGES.

To be Read before the Section on Medical Climatology, etc., of the International Medical Congress, Washington, D. C., September, 1887.

By HENRY B. BAKER, LANSING, MICH.

Thorp & Godfrey, State Printers and Binders, Lansing.

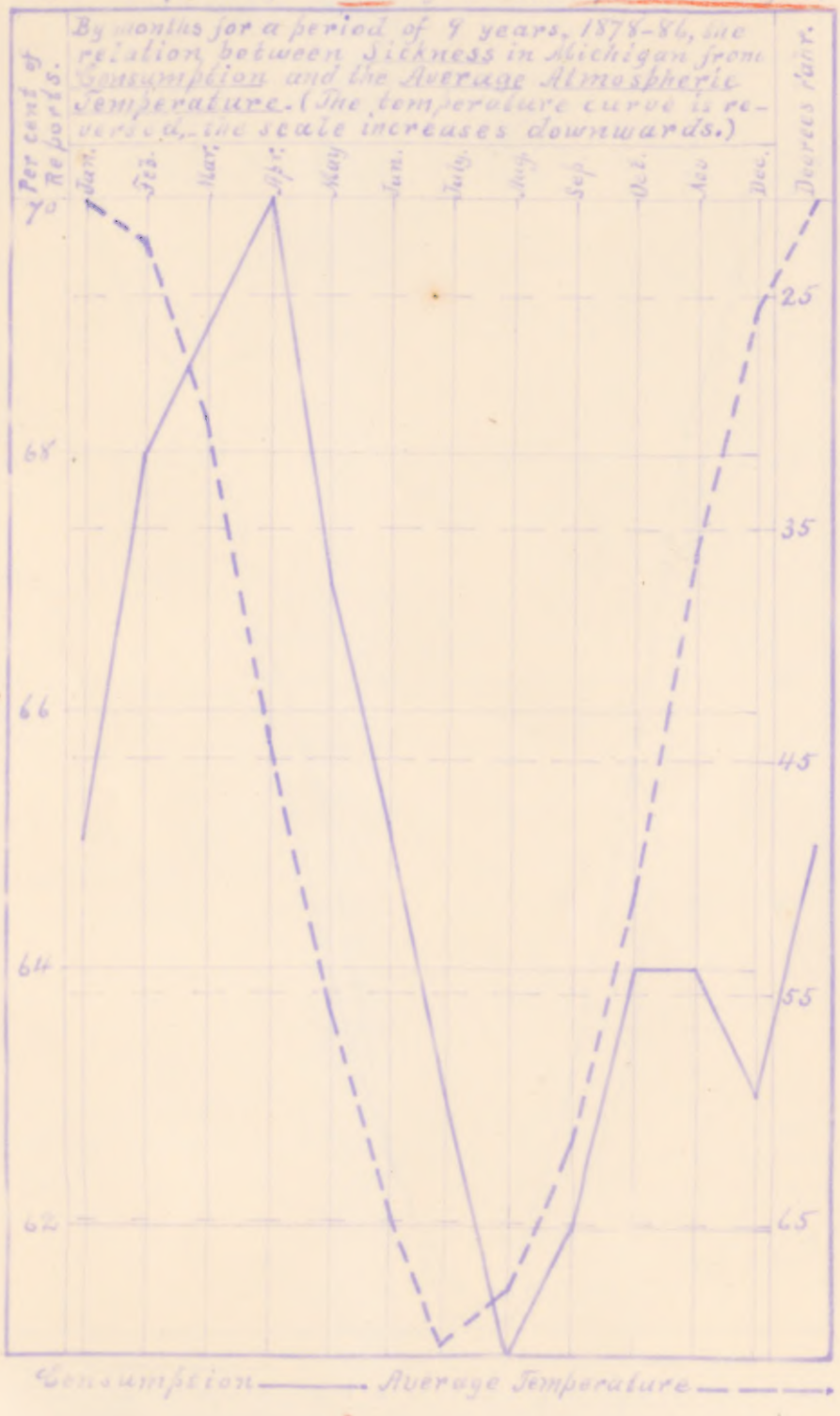
No. 10.- Temperature, and Deaths from Phthisis in London.



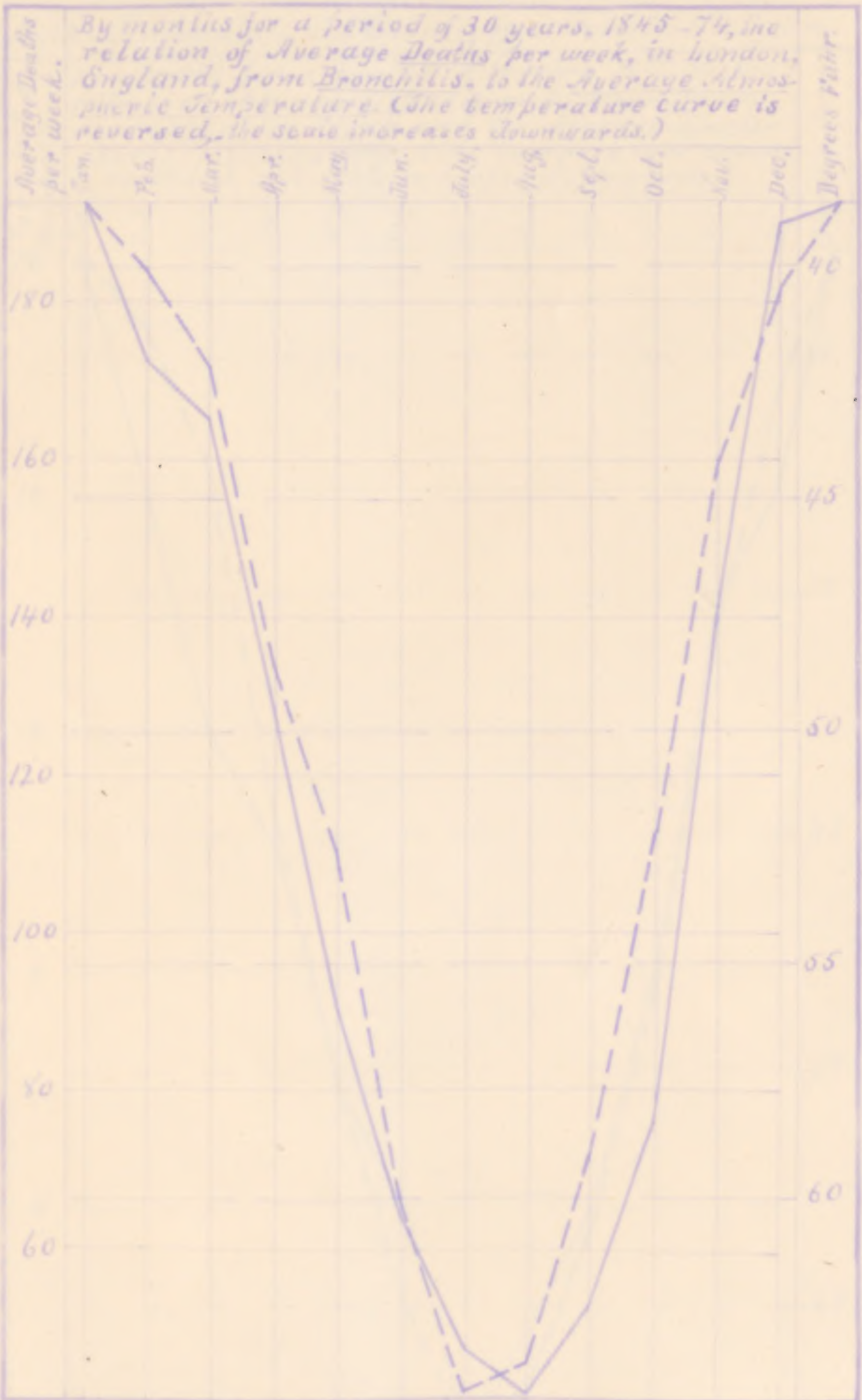
Deaths ——— . Average Temperature — — — .

About 231,000 deaths from Phthisis are represented in this diagram. Data for which are from Jour. of Scottish Met. Soc., New Series Nos. XLIII., XLIV., XLV., XLVI., pages 252 & 263.

No. 11. – Temperature, and Sickness from Consumption in Michigan.



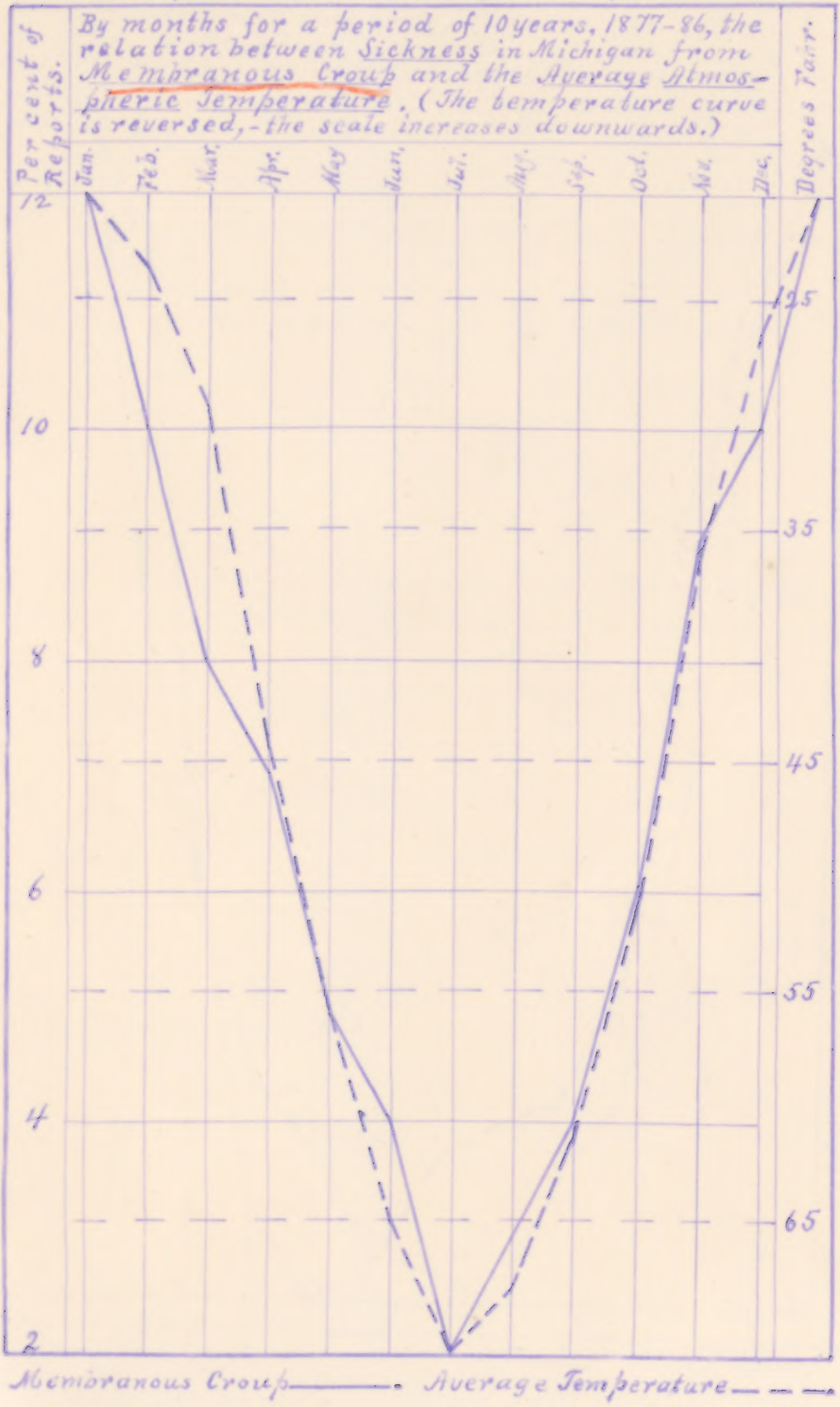
No. 12.–Temperature, and Deaths from Bronchitis in London.



Deaths ——————. Average Temperature — — —.

About 176,000 deaths from Bronchitis are represented in this diagram. Data for which are from Jour. of Scottish Met. Soc., New Series Nos. XLIII., XLIV., XLV., XLVI., pages 253 & 263.

No. 13.- Temperature, and Sickness from Croup in Michigan.



Tables from which the accompanying Diagrams were drawn.

No. 11. — Temperature, and Deaths from Phthisis in London.

		Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
[illegible]	[illegible] Phthisis	156	182.25	180.2	162	157.25	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Average [illegible] Degrees Fahr.	38.6	40.1	42.2	46.6	52.7	60.0	62.2	63.5	59.1	52.2	44.2	40.6

No. 14. — Temperature, and Sickness from Consumption in Edinburgh.

[illegible] years	[illegible]	65	68	69	70	67	65	63	61	62	64	[illegible]	63
	Average [illegible] Degrees Fahr.	38.72	42.66	38.23	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

No. 12. — Temperature, and Deaths from Bronchitis in London.

[illegible]	[illegible] Bronchitis	92.6	172.5	168.8	123.5	90.6	63.2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Average [illegible] Degrees Fahr.	[illegible]	[illegible]	[illegible]	[illegible]	52.7	60.0	62.2	63.5	59.1	52.2	44.2	40.6

No. 13. — Temperature, and Sickness from Croup in Edinburgh.

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Average [illegible] Degrees Fahr.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	70.52	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

No. [illegible] — Temperature, and Sickness from [illegible]

1873–5	[illegible]	102.8	[illegible]	57.8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Average [illegible] Degrees Fahr.	67.7	70.6	77.1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	92.0	90.5	76.2	69.1

UNITED STATES

POSTAL CARD.

WRITING BUT THE ADDRESS TO BE ON THIS SIDE.

STATE BOARD OF HEALTH,

HENRY B. BAKER, Secretary,

Lansing,

Michigan.

Diseases in ....[and vicinity?]

PLEASE DATE.

week ending Sat. .... , 188 ..

No.		Prevalence Order. See a.	Cases.
ED. 27.	Brain, Inflammation of		
	Bowels, Inflammation of		
	Bronchitis		
	Cerebro-spinal Meningitis		
	Cholera Infantum		
	Cholera Morbus		
	Consumption, Pulmonary		
	Croup, Membranous		
	Diphtheria		
	Diarrhea		
	Dysentery		
	Erysipelas		
	Fever, Intermittent		
	Fever, Remittent		
	Fever, Typhoid (Enteric)		
	Fever, Typho-malarial		
	Influenza		
	Kidney, Inflammation of		
	Measles		
	Neuralgia		
	Pleuritis		
	Pneumonia		
	Puerperal Fever		
	Rheumatism		
	Scarlatina		
	Small-pox		
	Tonsillitis		
	Whooping-cough		

This report is of diseases UNDER YOUR OBSERVATION. If it includes a contagious disease, please mention, on the bottom or margin of this card, the township, city, or village in which the disease is.

...., *M. D.*

THE READING OF THE DIAGRAMS.

For the convenience of those who use the following diagrams, it may be stated that they are to be read with reference to the figures in the right and left-hand margins, the numbers indicating the temperature being on the right and those representing the sickness or deaths, as the case may be, on the left. Thus, in diagram No. 1, it will be seen that in the month of January, the average atmospheric temperature for ten years was 20.56°, and in the same month the average per cent of reports which stated the presence of influenza was 55. In February the average atmospheric temperature was 23.62°, the per cent of reports stating the presence of influenza was 61. In August when the curves for atmospheric temperature and sickness both reached their lowest point (the curve for temperature being reversed) the per cent of reports stating presence of influenza was 21, while the average atmospheric temperature was 68.14°.

As an illustration the table giving by months the average atmospheric temperature and the influenza (from which diagram No. 1 is constructed) is given herewith:

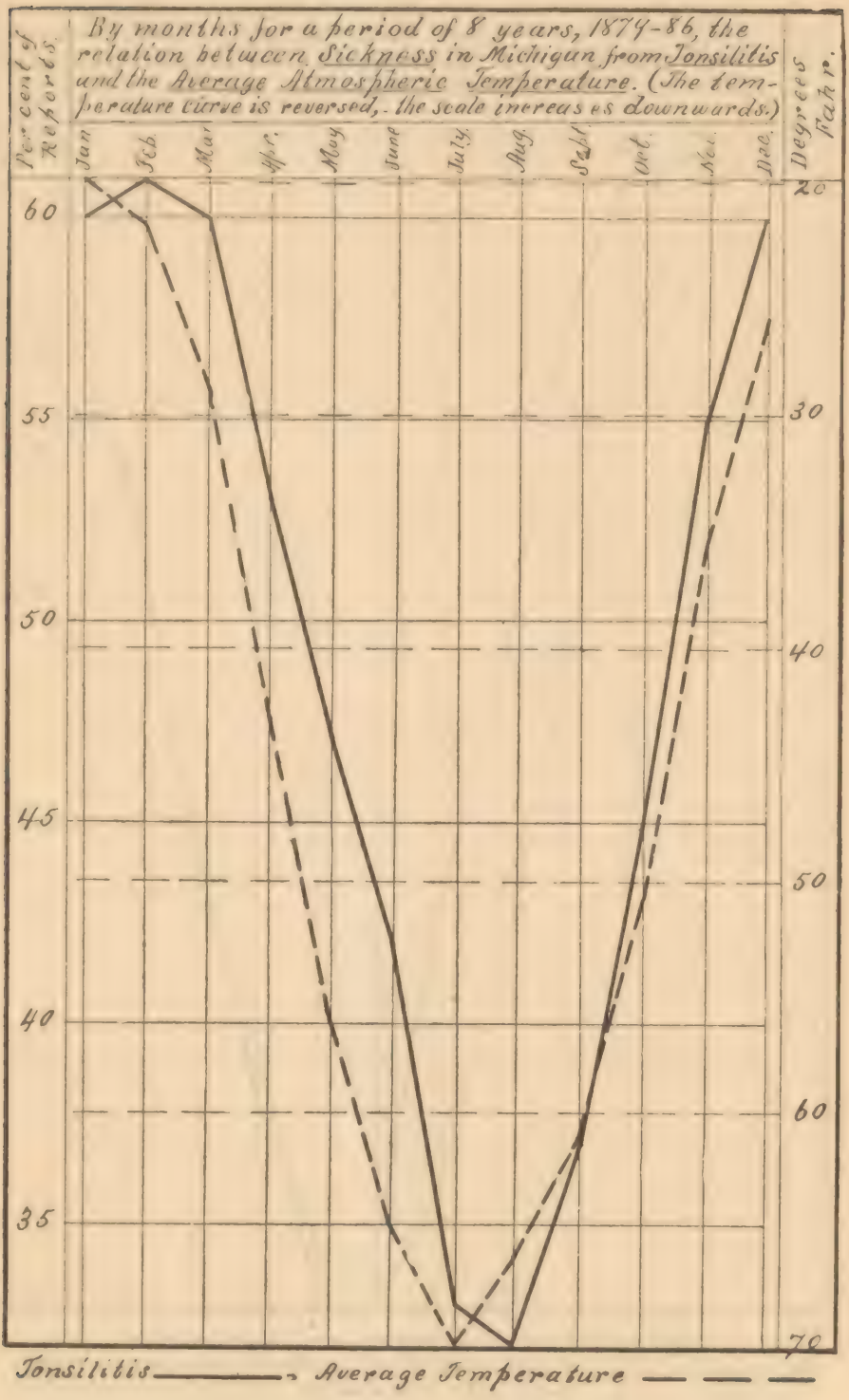
TABLE—*Stating by months for the ten years 1877–86 the average per cent of reports stating the presence of Influenza in Michigan, also the average Atmospheric Temperature for the same period.*

	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Per cent of Weekly Reports Stating Presence of Influenza.	55.	61.	59.	52.	38.	28.	20.	21.	29.	33.	41.	48.
Av. At. Temp. Degrees Fah.	20.56	23.62	29.80	44.33	56.08	65.10	70.52	68.14	61.67	50.83	36.04	26.60

For an exact reading of the figures, the tables which accompany the paper should be studied; but the relations of the temperature in one month to the sickness in that month or in a succeeding month can best be seen from the diagrams. In these diagrams in which the unit of time is one month and the curve representing sickness is made from reports of all cases under observation, old cases as well as new cases, the sickness curve should coincide with a curve representing a controlling cause of that sickness if the duration of the disease is less than one-half month and the disease has no period of incubation, otherwise the curves may be separated by an interval corresponding, as nearly as the long unit of time will permit, to the average duration of the incubation and the sickness.

No. 1.—*Temperature, and Sickness from Influenza in Michigan.*

No. 2.—*Temperature, and Sickness from Tonsilitis in Michigan.*



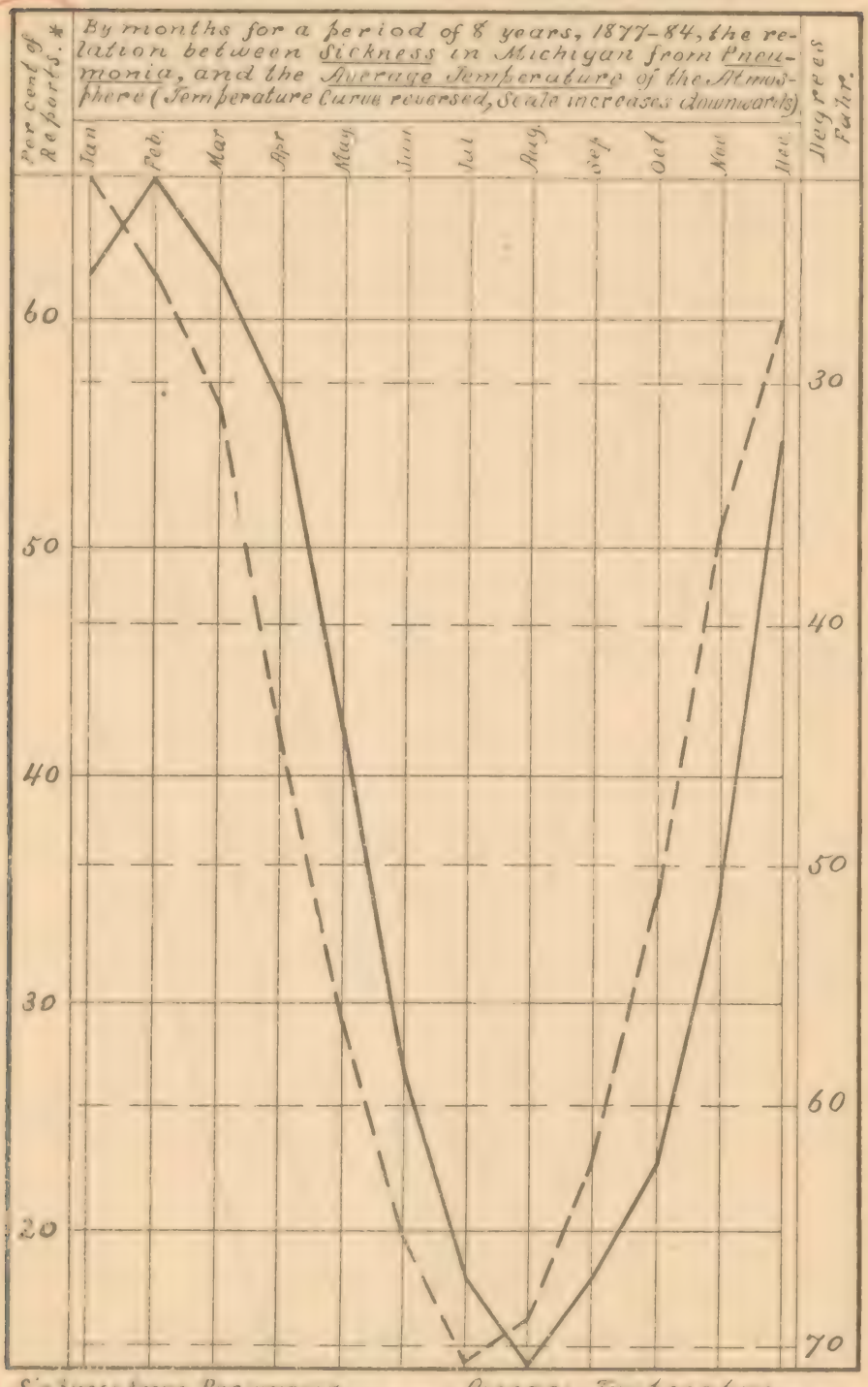
No. 3.—*Temperature, and Sickness from Bronchitis in Michigan.*

Bronchitis ———. Average Temperature — — —.

* Indicating what per cent of all reports received, stated the presence of Bronchitis then under the observation of the physicians reporting.

Over 35,000 weekly reports of sickness, and about 173,000 observations of the atmospheric temperature are represented in this diagram.

No. 4.—*Temperature, and Sickness from Pneumonia in Michigan.*

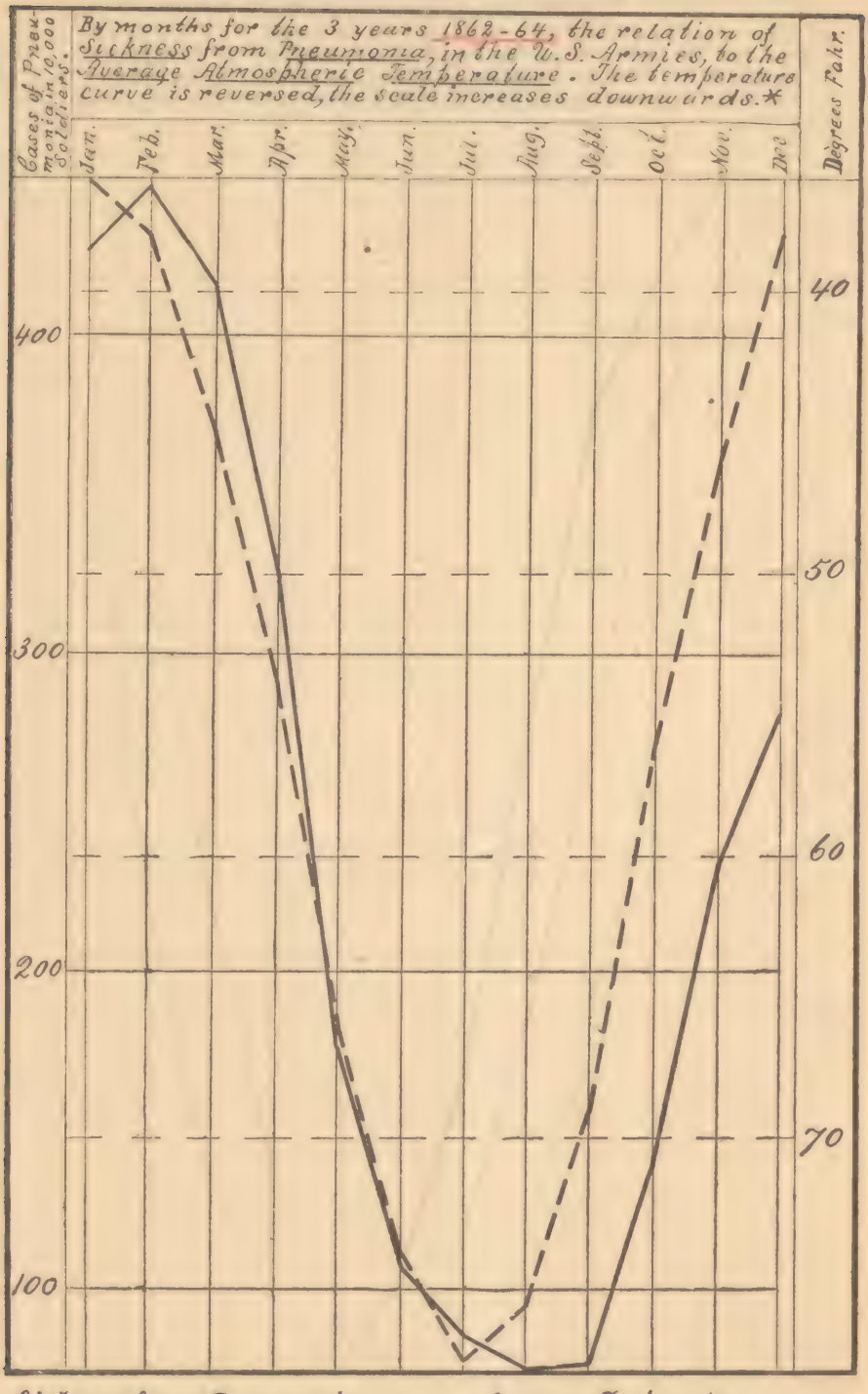


Sickness from Pneumonia ———. Average Temperature — —.

*Indicating what per cent of all reports received, stated the presence of pneumonia then under the observation of the physicians reporting.

Over 30,000 weekly reports of sickness, and over 150,000 observations of the atmospheric temperature are represented in this diagram.

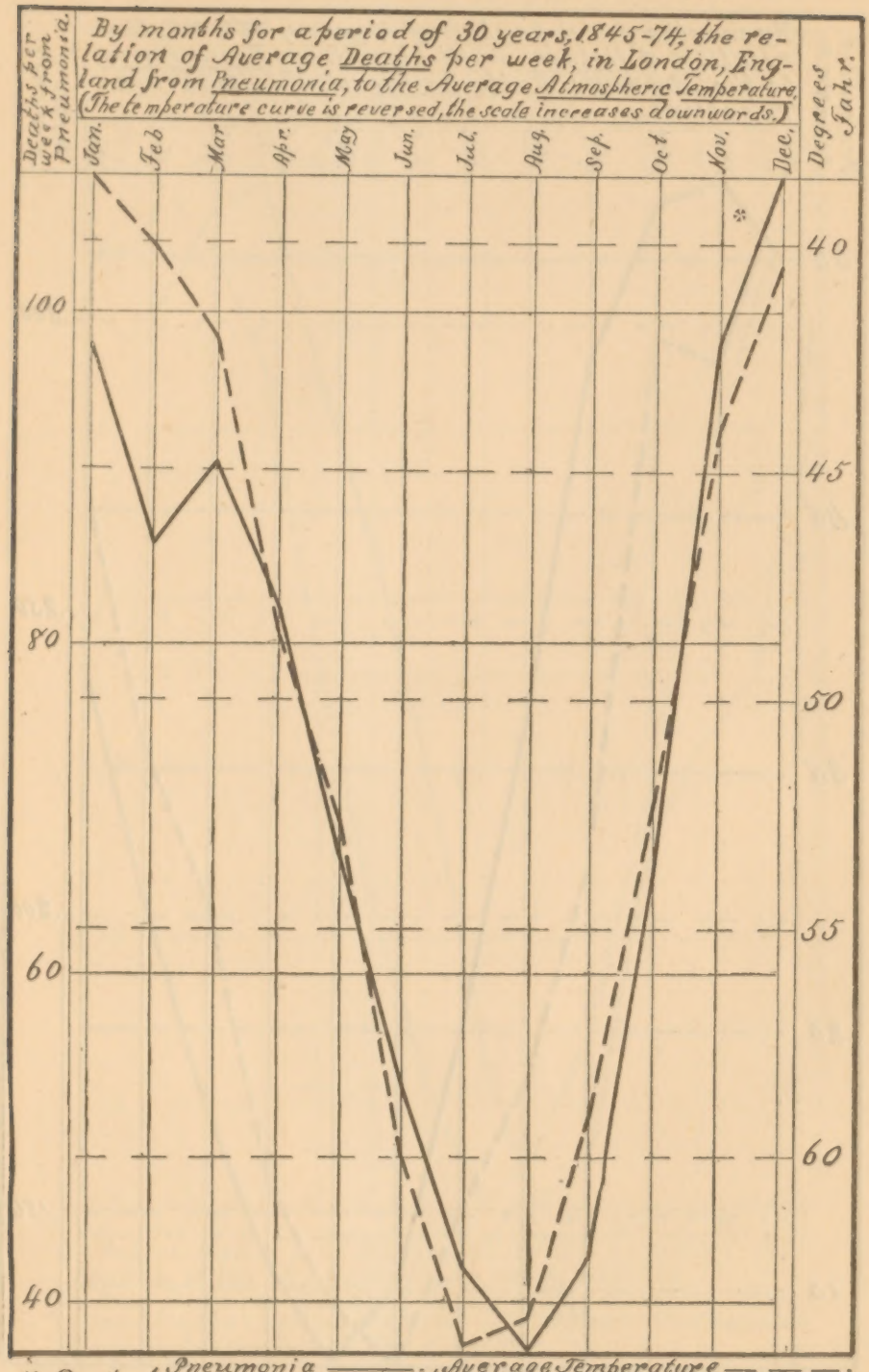
No. 5.—*Temperature, and Sickness from Pneumonia in U. S. Armies.*



Sickness from Pneumonia ——. *Average Temperature* — — —

* *The temperature curve is made from the normals at six stations representing approximately the localities occupied by the armies of the United States.*

No. 6.—*Temperature, and Deaths from Pneumonia in London.*

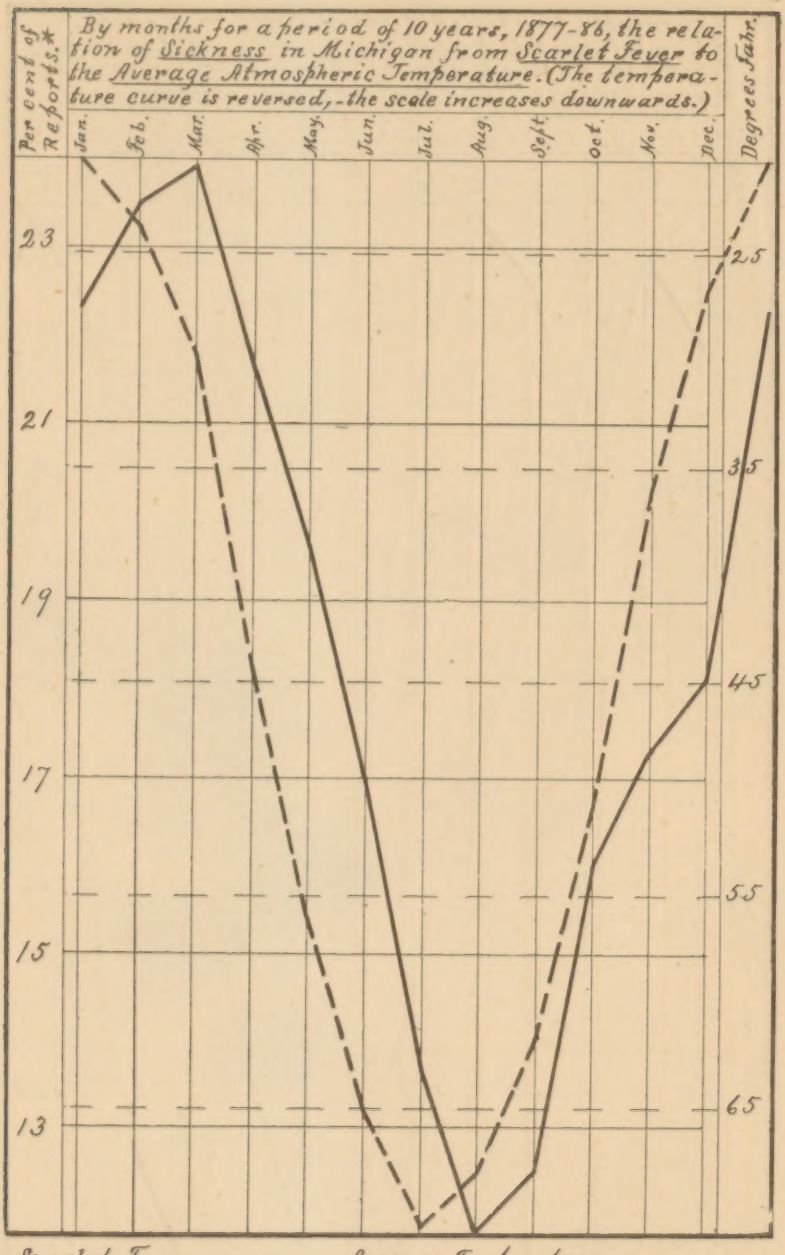


* Perhaps a greater proportion of deaths are returned for the later than for the earlier months in each year?

No. 7.—*Daily Range of Barometer, and Sickness from Pneumonia.*

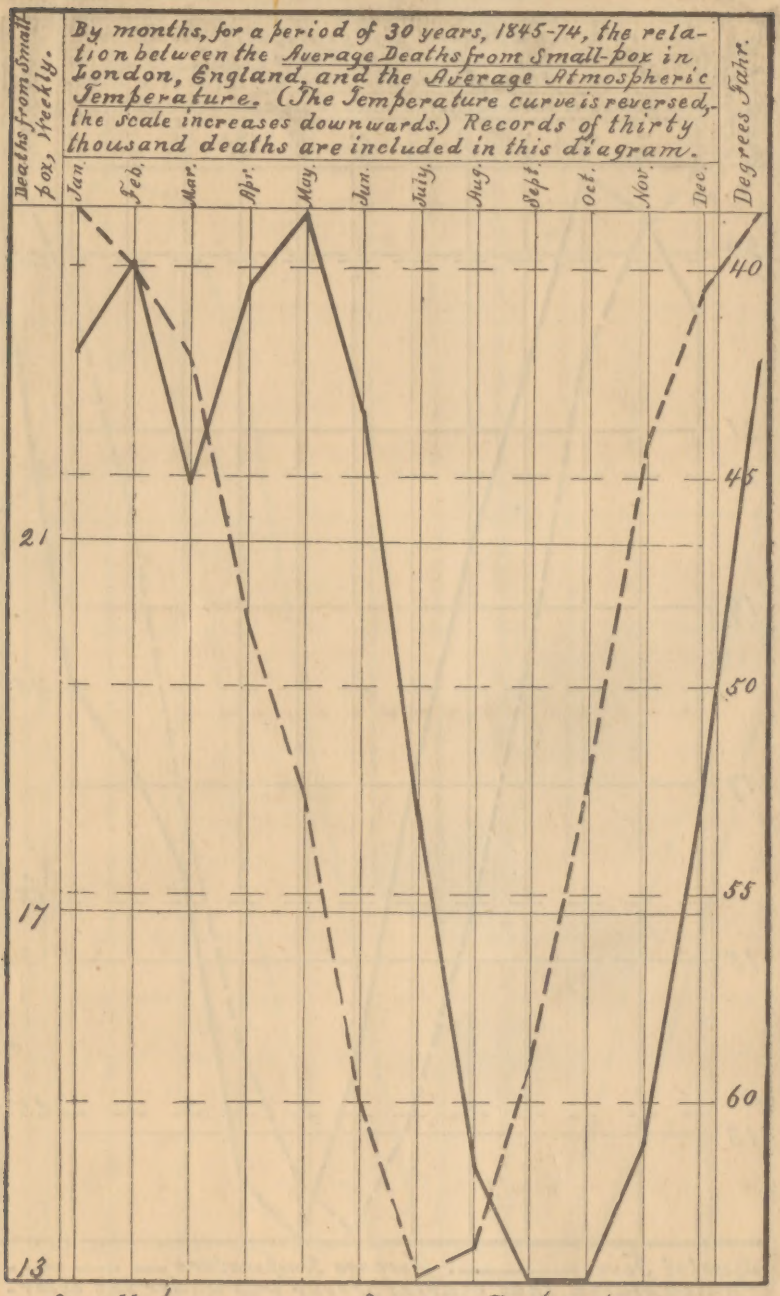
Sickness from Pneumonia ——. Av. daily range of Barometer — — —.
*Which stated that Pneumonia was under the observation of the physicians who made reports.

No. 8.—*Temperature, and Sickness from Scarlatina in Michigan.*



Scarlet Fever ———. Average Temperature — — — —.
*Which stated that Scarlet Fever was under the observation of the physicians who made reports.
Over forty-one thousand weekly reports of sickness and over 190,000 observations of the atmospheric Temperature are represented in this diagram.

No. 9.—*Temperature, and Deaths from Small-pox in London.*



Small-pox ———. Average Temperature — — —.
Except in a few months the Small-pox follows two months later than the temperature changes.
The line representing Small-pox should follow as long a time later than a line representing its controlling condition as is the average duration of the fatal cases plus the period of incubation?